

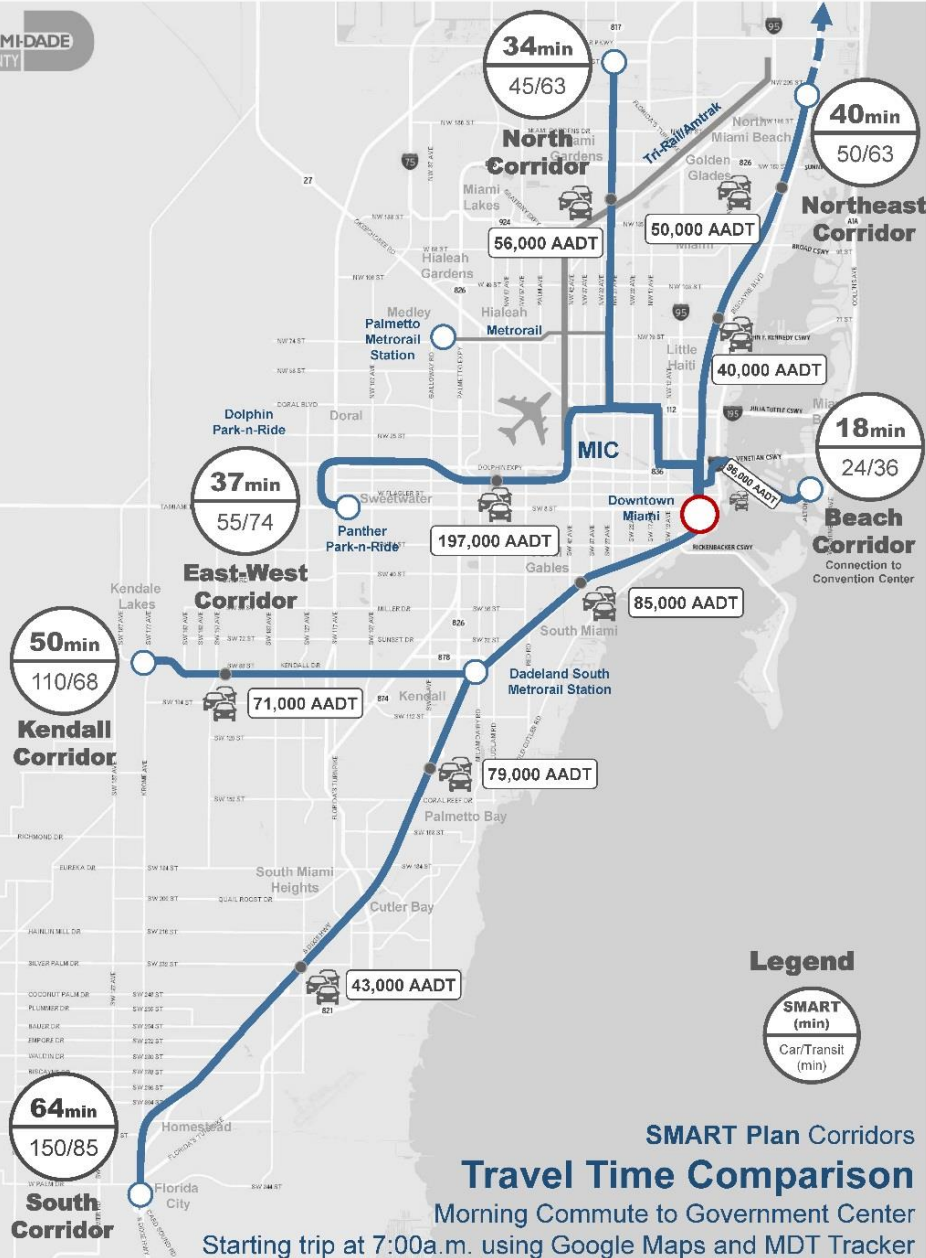


Miami-Dade County | Department of Transportation & Public Works

Alice N. Bravo, P.E., Director

Travel Time Comparison

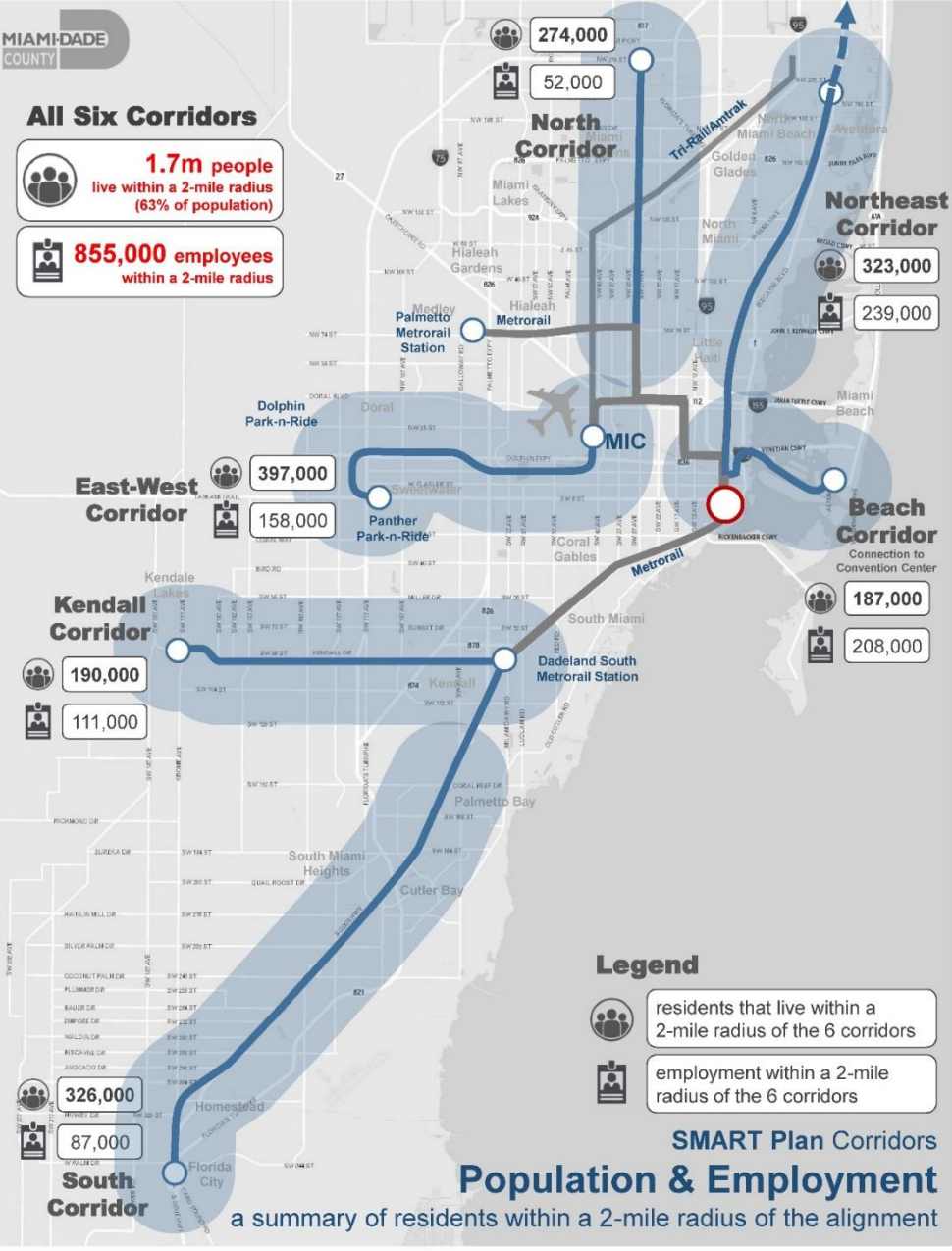
- Fully implemented SMART Plan Corridors will help commuters save time when compared to existing transit service or driving
- One-Seat rides to Downtown Miami will continue to provide options, thus reducing the need to drive



All Six Corridors

 **1.7m people**
live within a 2-mile radius
(63% of population)

 **855,000 employees**
within a 2-mile radius

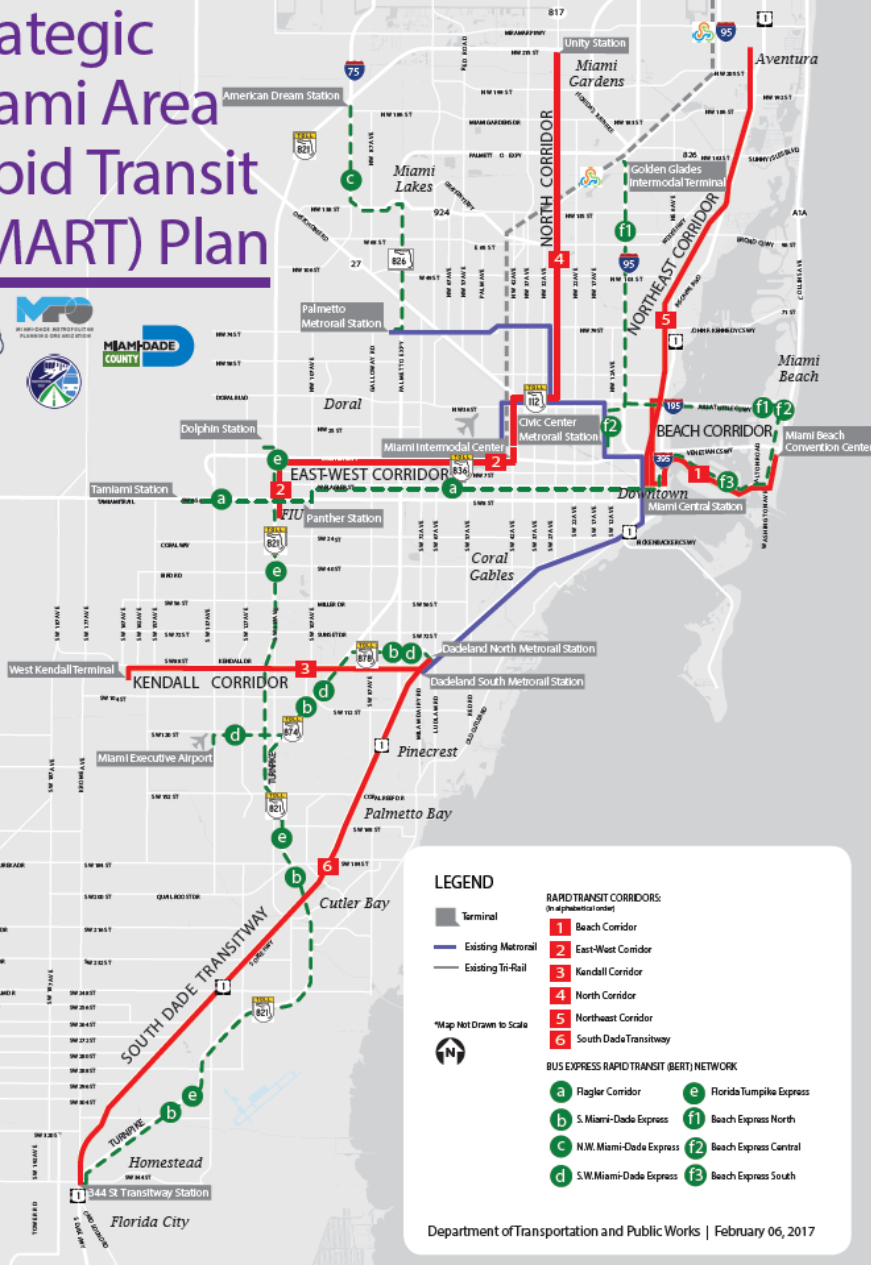


Population + Employment

Total population and employment within a 2-mile radius of all six corridors:

- **63% of the County's population** (1.7 million residents) live within 2-mile radius of the corridors
- **855,000 employees** are located within 2-mile radius of the corridors

Strategic Miami Area Rapid Transit (SMART) Plan



Development of a Financial Framework

Conceptual Cost Estimate Assumptions:

- Beach
- East-west
- Kendall
- North
- Northeast
- South

Beach Corridor

Conceptual Cost Estimate Assumptions (CCEA): Metromover Extension

HISTORICAL TIMELINE

1988	Miami Beach Light Rail Feasibility Study
1993	Transit Corridors Transitional Analysis
1998	East-West Multimodal Corridor Study (FIU – Miami Beach) Completed Draft Environmental Impact Statement (DEIS)
2002	Miami – Miami Beach Transportation Corridor (Bay Link) Study Completed Draft Environmental Impact Statement (DEIS)
2003	Locally Preferred Alternative (LPA)
2004	Phase 2 Bay Link Study Miami Beach Straw Ballot – Majority Support
2015	Beach Corridor Transit Connection Study
2016	Miami Beach proceeds with Miami Beach Connector PEC voted to pursue Federal funds for Miami Connector (Causeway - City of Miami) Miami Beach proceeds independently with Miami Beach Connector



Conceptual Cost Estimate Assumptions:

- Alignment: elevated Metromover extension running from Museum Park Station to 5th Street & Alton Road
- Length: 3.3 miles
- Total Capital Cost in \$2017 dollars: \$400 million
 - Including acquisition of new vehicles

Conceptual Cost Estimate Assumptions (CCEA): At-Grade/Partially Elevated Metrorail Extension

2016	<p>FDOT Selects a Consultant for Project Development - BRT/LRT along Flagler St</p> <p>Coordinating with FTA for Project Developmental Guidance</p>
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- Alignment: Partially at-grade/partially elevated mainly running along SR-836 from MIC to FIU
- Length: 10 miles
- Total Capital Cost in \$2017 dollars: \$923 million
 - Potential to leverage existing vehicles with a retrofit of overhead catenary system
- Additional vehicles might be required depending on implementation program

Kendall Corridor

Conceptual Cost Estimate Assumptions (CCEA): At-Grade Metrorail Extension

HISTORICAL TIMELINE

1993 Transit Corridors Transitional Analysis

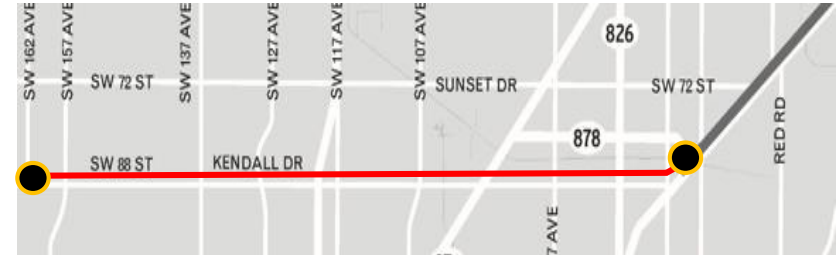
2001 Kendall – SR-826 Corridor Major Investment Study (MIS)

2005 CUTR BRT Opportunities Study

2007 Kendall Corridor Transportation Alternatives Analysis (Kendall Link)
Study recommends Bus Rapid Transit (BRT) along Kendall Drive

2015 MPO Directs FDOT to Initiate Project Development for BRT and LRT

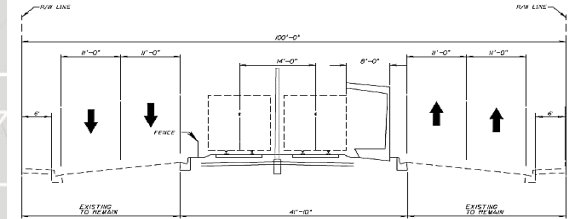
2016 FDOT Selects a Consultant for Project Development



Conceptual Cost Estimate Assumptions:

- Alignment: At-grade Metrorail Extension running along SW 88 Street median from Turnpike to Dadeland North Metrorail Station
- Length: 10 miles
- Total Capital Cost in \$2017 dollars: \$607million
 - Potential to leverage existing vehicles with a retrofit of overhead catenary system
- Additional vehicles might be required depending on implementation program

Conceptual Cost Estimate Assumptions (CCEA): At-Grade Metrorail Extension



- Alignment: At-grade Metrorail Extension running along NW 27 Avenue median from NW 215 Street to MLK Metrorail Station
- Length: 9.5 miles
- Total Capital Cost in \$2017 dollars: \$599 million
 - Potential to leverage existing vehicles with a retrofit of overhead catenary system
- Additional vehicles might be required depending on implementation program

Northeast Corridor

Conceptual Cost Estimate Assumptions (CCEA): Commuter Rail

HISTORICAL TIMELINE

1993

Transit Corridors Transitional Analysis

1996

Northeast Dade Transit Improvement Study

2003

SFRTD South Florida Transit Analysis Study

2004

FDOT Passenger Rail Component of Florida Rail Plan
MPO Rail Convertibility Study

2005

Southeast Florida East Coast Corridor (SFECC) Study
CUTR BRT Opportunities Study

2013

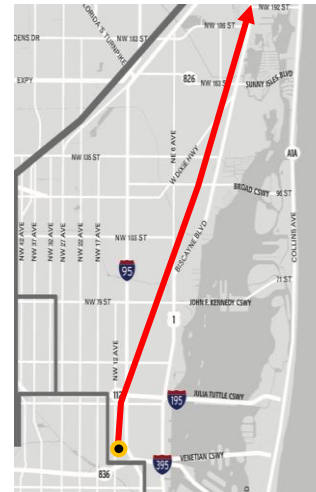
SFECC Study Rebranded as Tri-Rail Coastal Link Study
FDOT Selects a Consultant for Project Development

2015

Collaboration to Fund CRT Platforms at All Aboard's
Miami Central Station

2016

FDOT Project Development Study Underway



Conceptual Cost Estimate Assumptions:

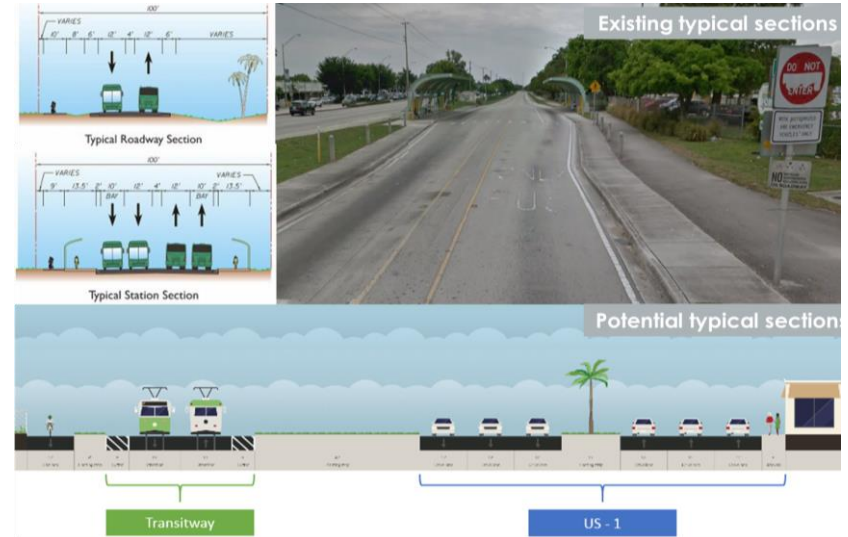
- Alignment: At-grade running along existing FEC corridor from Downtown Miami to Aventura utilizing existing resources
- Length: 14 miles
 - Miami Central Station + 5 additional stations
- Total Capital Cost in \$2017 dollars: \$186 million
 - Including acquisition of new vehicles

South Corridor

Conceptual Cost Estimate Assumptions (CCEA): At-Grade Metrorail Extension

HISTORICAL TIMELINE

1986	MPO South Dade Exclusive Bus Lanes Report
1989	FDOT South Dade Exclusive Bus Lanes Corridor Feasibility Study
1992	US-1 Exclusive Bus Lanes Project Development Study
1993	Transit Corridors Transitional Analysis
1996	US-1 Phase II Exclusive Bus Lanes PD&E Study
1997	Busway Phase 1 Opens (SW 112 Avenue to Dadeland South)
2004	MPO Rail Convertibility Study Recommends Feasibility Assessment of the Oleander – Zoo Miami Segment
2005	Busway Phase 2, Segment 1 (North), Opens (SW 264 Street to SW 112 Avenue)
2006	Completion of Kendall Corridor Alternatives Analysis Study Recommends Diesel LRT (DLRT) along CSX to Zoo Miami as a mid-term strategy
2007	Busway Phase 2, Segment 2 (South), Opens (SW 264 Street to SW 344 Street), MPO South Link Study MPO selects Local Preferred Alternative (LPA)
2016	Update of MPO South Link Study



Conceptual Cost Estimate Assumptions:

- Alignment: At-grade running along existing Transitway
- Length: 20 miles
- Total Capital Cost in \$2017 dollars: \$640 million
 - Potential to leverage existing vehicles with a retrofit of overhead catenary system
- Additional vehicles might be required depending on implementation program

SMART PLAN CONCEPTUAL CORRIDOR COST ESTIMATES

(in \$2017 dollars)

(based on mode and alignment assumptions as outlined below)

Corridor	Mode selected for Conceptual Cost estimate purposes only	System Configuration	Approx. Length (Miles)	Estimated Construction Cost (inc. hard and soft costs)	Estimated Right of Way Acquisition Cost	Estimated Subtotal Project Cost	Estimated Additional Vehicle Cost (includes retrofit cost of 136 replacement rail cars)	Estimated Additional Annual Operating Cost
East/West	Metrorail	Partially at grade/partially elevated mainly running along SR-836 from MIC to FIU	10	\$848,000,000	\$75,000,000	\$923,000,000	\$230,000,000	\$93,000,000
Kendall	Metrorail	At grade running along SW 88 St. median from SW 162 Ave to Dadeland North Station	10	\$532,000,000	\$75,000,000	\$607,000,000		
North	Metrorail	At grade running along NW 27th Ave. median from NW 215 Street to MLK Station	9.5	\$524,000,000	\$75,000,000	\$599,000,000		
South	Metrorail	At grade running along existing Transitway	20	\$615,000,000	\$25,000,000	\$640,000,000		
Beach	Metromover	Elevated metromover extension running from Museum Park Station to 5th Street & Alton	3.3	\$360,000,000	\$0	\$360,000,000	\$40,000,000	\$7,000,000
Northeast	Commuter Rail	At grade running along existing FEC corridor from Downtown Miami to Aventura utilizing existing resources	14	\$126,000,000	\$41,000,000	\$167,000,000	\$19,000,000	\$16,000,000
			66.8	Total in \$2017		\$3,296,000,000	\$289,000,000	\$116,000,000

SMART Plan Financial Implementation Alternatives

(for comparison purposes)

Fast Alternative (66.8 miles)



- All corridors move forward immediately
- Available funding assumptions include:
 - 25% Florida Department of Transportation (FDOT)
 - Existing Peoples Transportation Plan (PTP) Surtax
 - Funding Gap (additional revenues required)
- Timeline:
 - Projects to be implemented in a 2- to 6-year horizon
- \$2017 Total Capital: \$3.6 billion
 - Federal - \$0.0
 - State - \$896 million (assuming successful receiving avg. 25% each corridor)
 - Existing PTP Net Present Value - \$350 million
 - **Funding Gap - \$2.34 billion**

SMART Plan Financial Implementation Alternatives

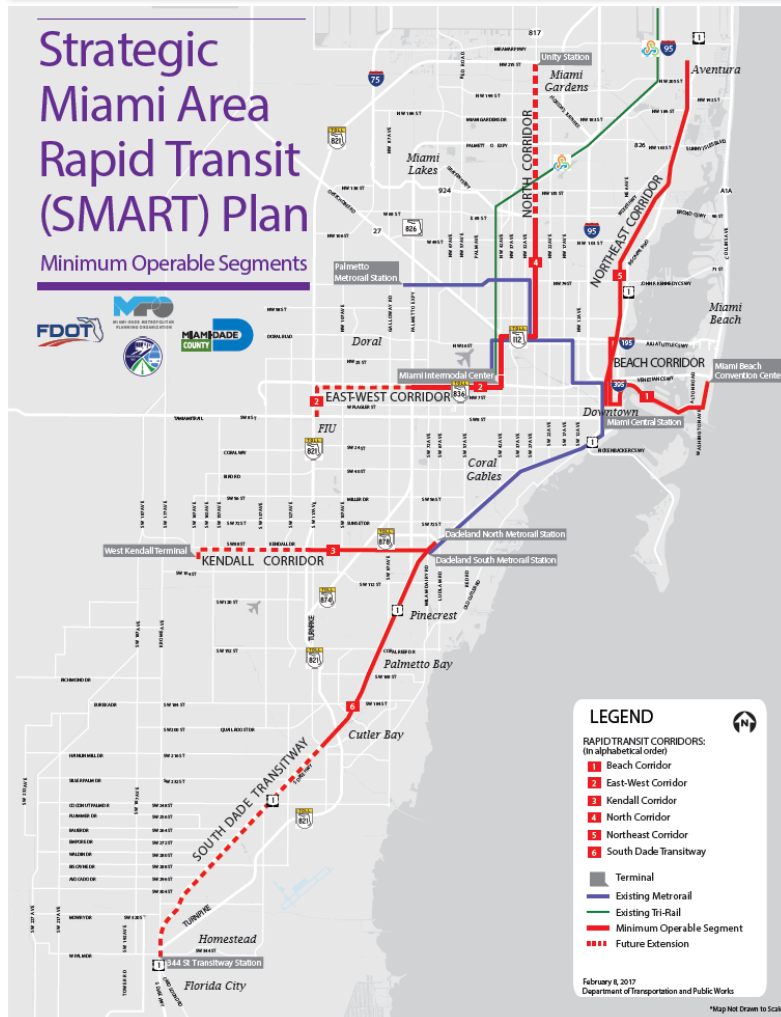
(for comparison purposes)

Medium Alternative (66.8 miles)



- All corridors move forward
 - Federal funding pursued on 3 of 6 corridors
- Available funding assumptions include:
 - 25% Florida Department of Transportation (FDOT)
 - 40% average Federal Transit Administration (FTA) for three corridors
 - Existing Peoples Transportation Plan (PTP) Surtax
 - Funding Gap (additional revenues required)
- Timeline:
 - Non-Federal projects to be implemented in a 3- to 5-year horizon
 - Federal Funded corridors to be implemented in a 5- to 20-year horizon
- \$2017 Total Capital: \$3.6 billion
 - Federal - \$906 million; State - \$896 million
 - Assuming successful receiving avg. 25% each corridor
 - Existing PTP Net Present Value - \$350 million
 - **Funding Gap - \$1.43 billion**

Minimum Operable Segment Implementation (for comparison purposes)



- Minimum Operable Segments
 - East-West – MIC to Palmetto Expy
 - Kendall – Dadeland South to Turnpike
 - North – MLK Station to NW 119 St
 - South – Dadeland South to SW 200 St
 - Beach – Same as full deployment
 - Northeast – Same as full deployment
- All MOS move forward as cash flow permits
- Available funding includes:
 - 25% FDOT; 40% average FTA for three corridors; Existing PTP Surtax; Funding Gap (additional revenues required)
- \$2017 Total Capital: \$1.9 billion
 - Federal - \$413m; State - \$488m; Ex. PTP NPV - \$350m; **Gap - \$702m**

Slow

SMART PLAN CONCEPTUAL CORRIDOR COST ESTIMATES

(in \$2017 dollars)

(based on mode and alignment assumptions as outlined below)

Corridor	Mode selected for Conceptual Cost estimate purposes only	System Configuration	Approx. Length (Miles)	Estimated Construction Cost (inc. hard and soft costs)	Estimated Right of Way Acquisition Cost	Estimated Subtotal Project Cost	Estimated Additional Vehicle Cost (includes retrofit cost of 136 replacement rail cars)	Estimated Additional Annual Operating Cost
East/West	Metrorail	Partially at grade/partially elevated mainly running along SR-836 from MIC to Mall of the Americas/Palmetto Expressway	5	\$436,500,000	\$37,500,000	\$474,000,000	\$110,000,000	\$60,000,000
Kendall	Metrorail	At grade running along SW 88 St. median from Turnpike to Dadeland North Metrorail Station	5	\$240,500,000	\$37,500,000	\$278,000,000		
North	Metrorail	At grade running along NW 27th Ave. median from NW 119 Street (MDC) to MLK Station	5.3	\$186,000,000	\$25,000,000	\$211,000,000		
South	Metrorail	At grade running along existing Transitway from SW 112 Ave/200 St (Target Lot) to Dadeland South Metrorail Station	8.3	\$280,000,000	\$15,000,000	\$295,000,000		
Beach	Metromover	Elevated metromover extension running from Museum Park Station to 5th Street & Alton	3.3	\$360,000,000	\$0	\$360,000,000	\$40,000,000	\$7,000,000
Northeast	Commuter Rail	At grade running along existing FEC corridor from Downtown Miami to Aventura utilizing existing resources	14	\$126,000,000	\$41,000,000	\$167,000,000	\$19,000,000	\$16,000,000
			40.9 (61% of full plan)	Total in \$2017		\$1,785,000,000	\$169,000,000	\$83,000,000

Summary of Conceptual Cost Estimates

(for comparison purposes)

\$2017 dollars	Fast	Medium	Slow- Min. Operating Segment
Corridor Miles Implemented	66.8 miles	66.8 miles	40.9 miles
Total Capital Cost	\$ 3,585,000,000	\$ 3,585,000,000	\$ 1,954,000,000
Federal Funding	\$ -	\$ (906,428,283)	\$ (413,725,424)
State Funding	\$ (896,250,000)	\$ (896,250,000)	\$ (488,500,000)
Existing PTP NPV	\$ (350,000,000)	\$ (350,000,000)	\$ (350,000,000)
Funding Gap	\$ 2,338,750,000	\$ 1,432,321,717	\$ 701,774,576
Annual O&M \$2017 At time of implementation	\$ 116,000,000	\$ 116,000,000	\$ 83,000,000

SMART Plan in Action

- Northeast Corridor – development of Miami Central Station
- East-West Corridor – groundbreaking of Dolphin Park-n-Ride
- South Corridor – development of Park-n-Rides along the Transitway
- North Corridor – development of Transit Oriented Development at County Line

